Applicant: Richard E. Smalley et al. Attorney's Docket No.: 21753-014001 Serial No.: 09/935.995 (formerly 11321-P014US)

Serial No. : 09/935,995 Filed August 23, 2001

Page : 2

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-35. (Cancelled)

- 36. (Previously Presented) A composition of matter comprising an aggregate of uncoated single-wall carbon nanotubes wherein the aggregate is wrapped with one or more polymers selected from the group consisting of: polyvinyl pyrrolidone (PVP), polystyrene sulfonate (PSS), poly(1-vinyl pyrrolidone-co-vinyl acetate) (PVP/VA), poly(1-vinyl pyrrolidone-coacrylic acid), poly(1-vinyl pyrrolidone-co-dimethylaminoethyl methacrylate), polyvinyl sulfate, poly(sodium styrene sulfonic acid-co-maleic acid), dextran, dextran sulfate, bovine serum albumin (BSA), poly(methyl methacrylate-co-ethyl acrylate), polyvinyl alcohol, polyethylene glycol, and polyallyl amine.
- 37. (Original) A composition of matter in accordance with claim 36, wherein the aggregate of uncoated single-wall carbon nanotubes comprises a rope of single-wall carbon nanotubes in which the nanotubes are substantially aligned along their longitudinal axes.
- 38. (Original) A composition of matter in accordance with claim 36, wherein the aggregate of uncoated single-wall carbon nanotubes comprises a bundle of single-wall carbon nanotubes in which the nanotubes are substantially aligned along their longitudinal axes.

39-40. (Cancelled)

- 41. (Original) A composition of matter in accordance with claim 36, wherein said polymer is attached to the aggregate of the single-wall carbon nanotubes by non-covalent forces.
- 42. (Original) A composition of matter in accordance with claim 36, wherein the aggregate of single-wall carbon nanotubes is coated with at least two different polymers.

43-44. (Cancelled)

Applicant : Richard E. Smalley et al. Attorney's Docket No.: 21753-014001 Serial No.: 09/935.995 (formerly 11321-P014US)

Serial No.: 09/935,995 Filed: August 23, 2001

Page : 3

45. (Original) A composition of matter in accordance with claim 36, wherein the polymer-coated aggregate of single-wall carbon nanotubes is prepared by a process comprising dispersing the uncoated aggregates of single-wall carbon nanotubes and a polymer in a solvent by a method selected from the group consisting of mixing, sonication, heating and combinations thereof.

- 46. (Currently amended) A composition of matter in accordance with claim 45, wherein the coated carbon nanotube aggregates are aggregate is prepared by a process further comprising adding salt in a quantity effective to promote wrapping of polymer on the aggregate of single-wall carbon nanotubes, whereby polymer becomes wrapped on the exterior of the aggregate of single-wall carbon nanotubes.
- 47. (Currently amended) A composition of matter in accordance with claim 45, wherein the aggregate of single-wall carbon nanotubes are is substantially free of amorphous carbon.
- 48. (Original) A composition of matter in accordance with claim 45, wherein the polymer is suspended in the solvent.
- 49. (Original) A composition of matter in accordance with claim 45, wherein the polymer and the uncoated aggregate of single-wall carbon nanotubes are added to the solvent sequentially.
- 50. (Currently amended) A composition of matter in accordance with claim 45, wherein the polymer and the uncoated <u>aggregate of</u> single-wall carbon nanotubes are added to the solvent simultaneously.
- 51. (Original) A composition of matter in accordance with claim 45, wherein the solvent is aqueous and the polymer is water-soluble.
- 52. (Previously presented) A composition of matter in accordance with claim 51, wherein the solvent further comprises a surfactant that promotes wrapping of the polymer on the aggregate of single-wall carbon nanotubes.
- 53. (Original) A composition of matter in accordance with claim 45, wherein the concentration of the aggregate of uncoated single-wall carbon nanotubes in the solvent is between

Applicant: Richard E. Smalley et al.

Serial No.: 09/935,995

Attorney's Docket No.: 21753-014001

(formerly 11321-P014US)

Serial No. : 09/935,995 Filed : August 23, 2001

Page : 4

about 0.1 grams/liter and about 5 grams/liter.

54. (Original) A composition of matter in accordance with claim 45, wherein the concentration of polymer in the solvent is between about 1.0 percent and about 5.0 percent by weight.

- 55. (Original) A composition of matter in accordance with claim 45, wherein the solvent is heated to a temperature at least about 40 °C.
- 56. (Original) A composition of matter in accordance with claim 45, wherein the solvent is heated to a temperature of between about 50 °C and about 60 °C.
- 57. (Original) A composition of matter in accordance with claim 45, wherein the solvent is heated between about 0.1 hours and about 100 hours.
- 58. (Original) A composition of matter in accordance with claim 45, wherein the solvent is heated between about 1 hour and about 50 hours.
- 59. (Original) A composition of matter in accordance with claim 45, wherein the coated aggregate of single-wall carbon nanotubes comprises earbon nanotubes which are substantially aligned along their longitudinal axes.
 - 60. (Cancelled)
- 61. (Previously presented) A composition of matter in accordance with claim 45, comprising at least two polymers, wherein a first polymer coats a first portion of the aggregate and a second polymer coats a second portion of the aggregate, wherein the first polymer is cross-linked with the second polymer.
- 62. (Currently amended) A composition of matter in accordance with claim 45, wherein at least one polymer has a first portion and a second portion, and wherein the first portion and the second portion of the polymer coat the aggregate, and and, wherein the first portion of the polymer is cross-linked with the second portion of the polymer.

Applicant: Richard E. Smalley et al. Attorney's Docket No.: 21753-014001 (formerly 11321-P014US)

Serial No.: 09/935,995 : August 23, 2001 Pilled

Page 2.5

63. (Original) A composition of matter in accordance with claim 45, wherein the polymer-coated single-wall carbon nanotube aggregate is suspended in a polymer matrix.

64. (Original) A composition of matter in accordance with claim 63, wherein the polymer matrix comprises a material selected from the group consisting of poly(methyl methacrylate), polystyrene, polypropylene, nylon, polycarbonate, polyolefin, polyethylene, polyester, polyimide, polyamide, epoxy, phenolic resin and combinations thereof.

65. (Cancelled)